Balanced and Single IF Measurements CSO Mixers (3-9 GHz)

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Design of the IF board is for a 20 Ohm SIS IF impedance. The measurement uses standard 50 Ohm coaxial Radial Connectors. The test structures have been cooled at least 5X to LN2, and remounted twice to confirm assembly repeatability.

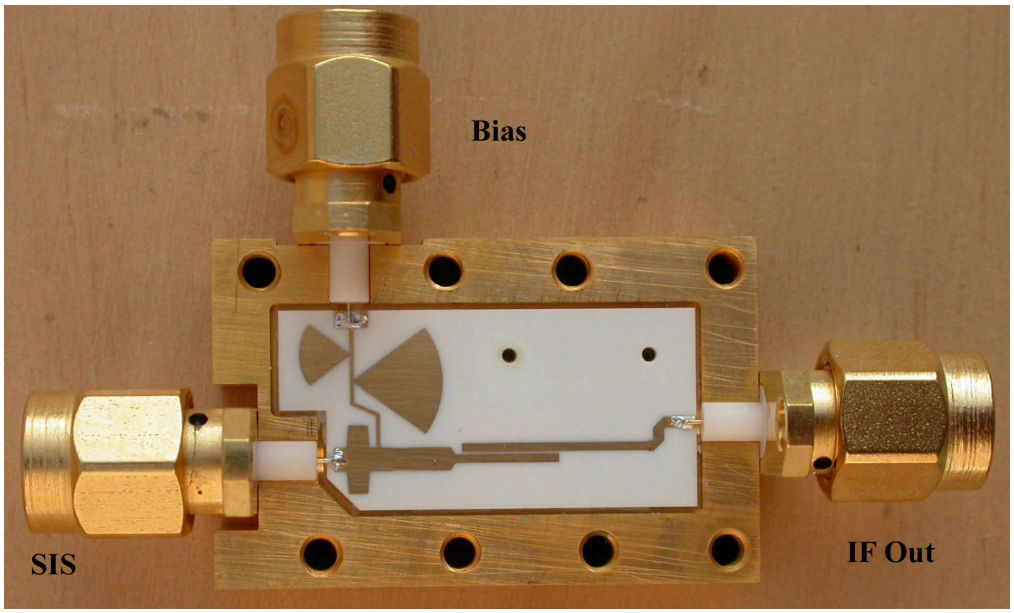

Fig. 1. Single IF test block for "Barney" en Correlation Rx.

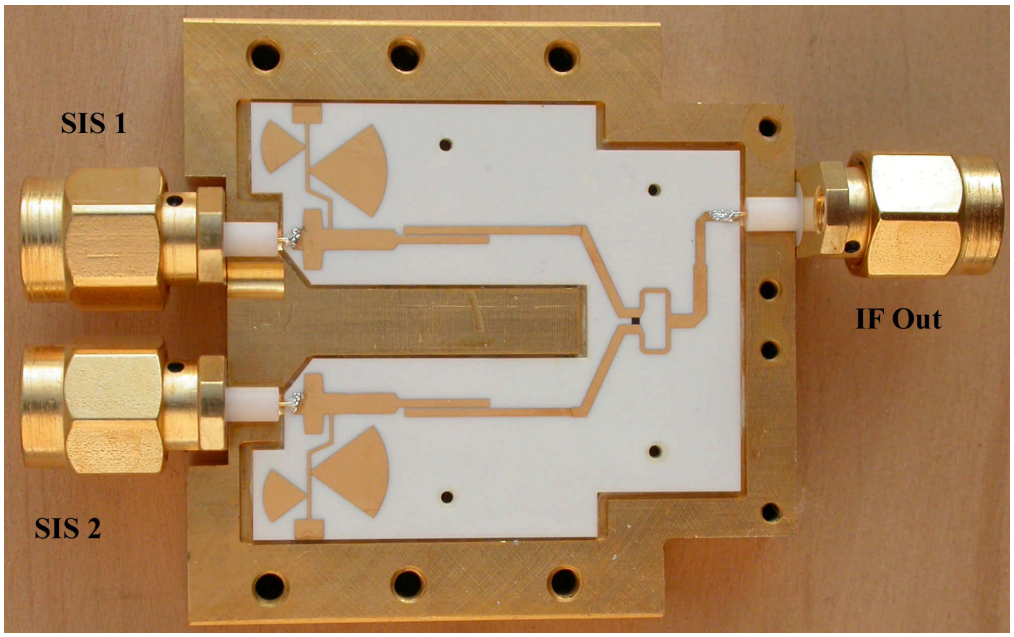

Fig. 2. Balanced IF test block.

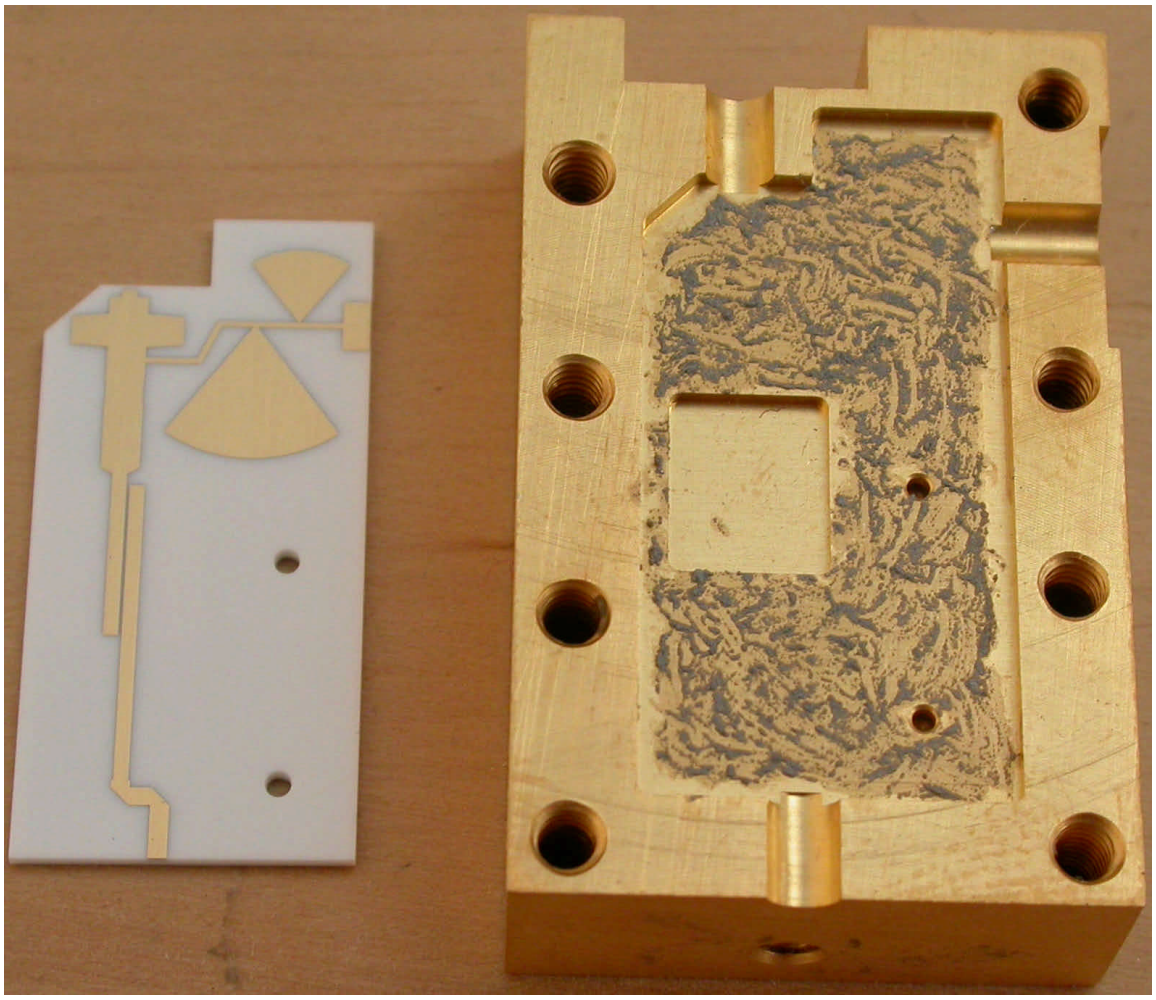

Fig. 3 Single IF test block for "Barney" en Correlation Rx assembly with Indium 290.

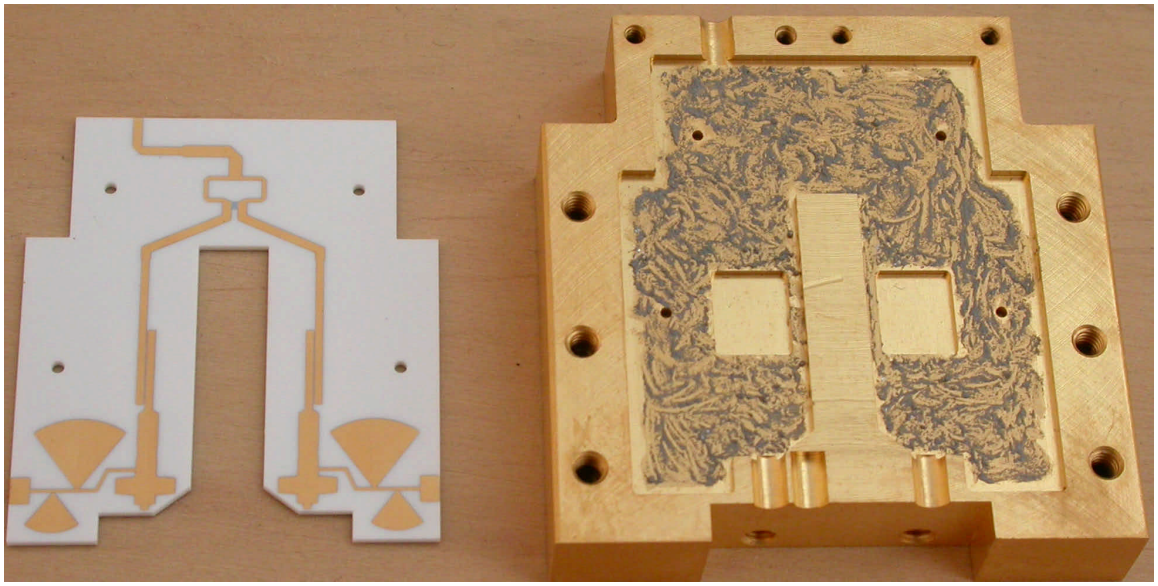

Fig. 4 Balanced IF test block with Indium 290.

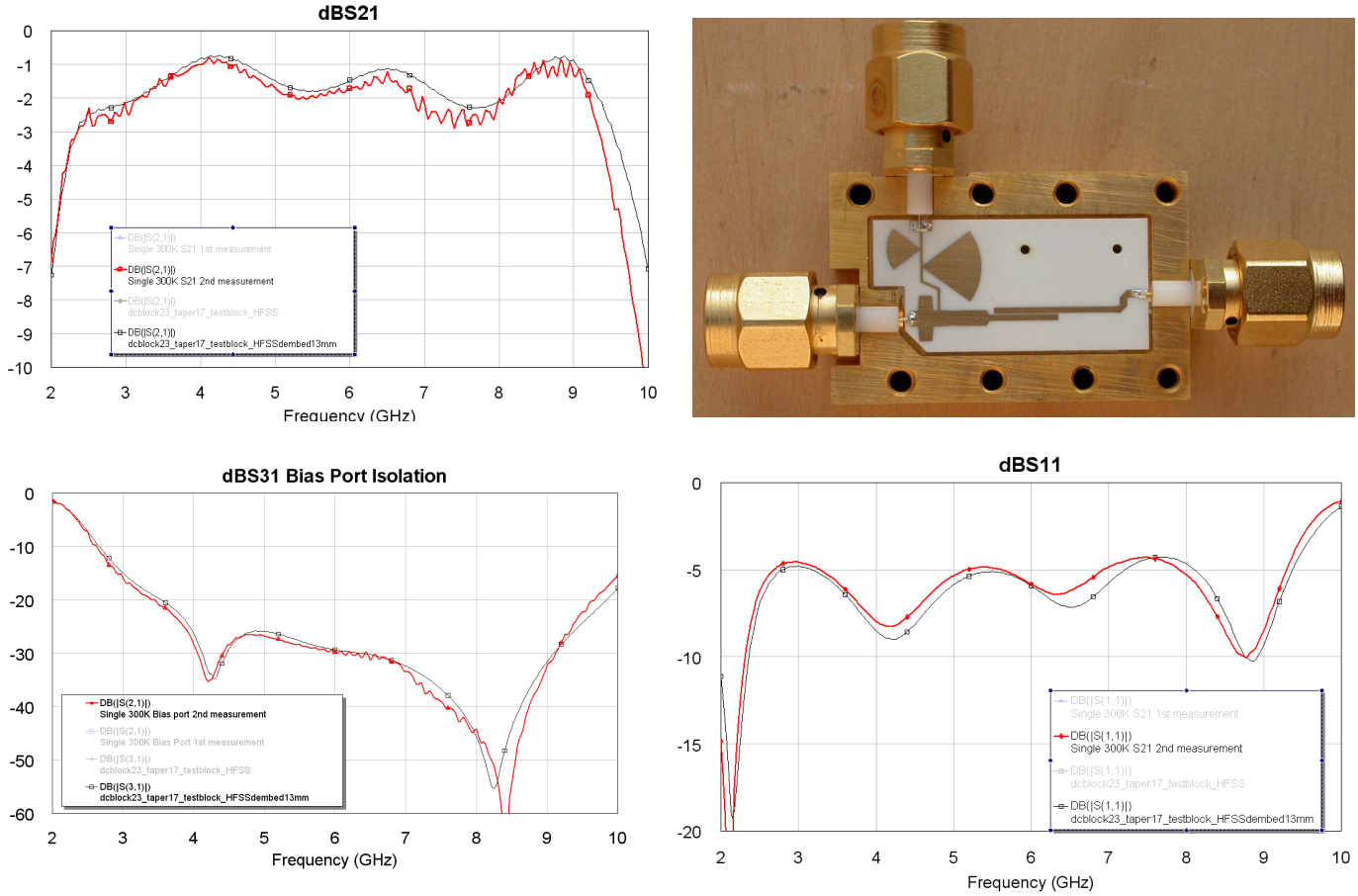

Fig. 5 *Measured and Modeled IF response of "Barney" en Correlation Rx.*

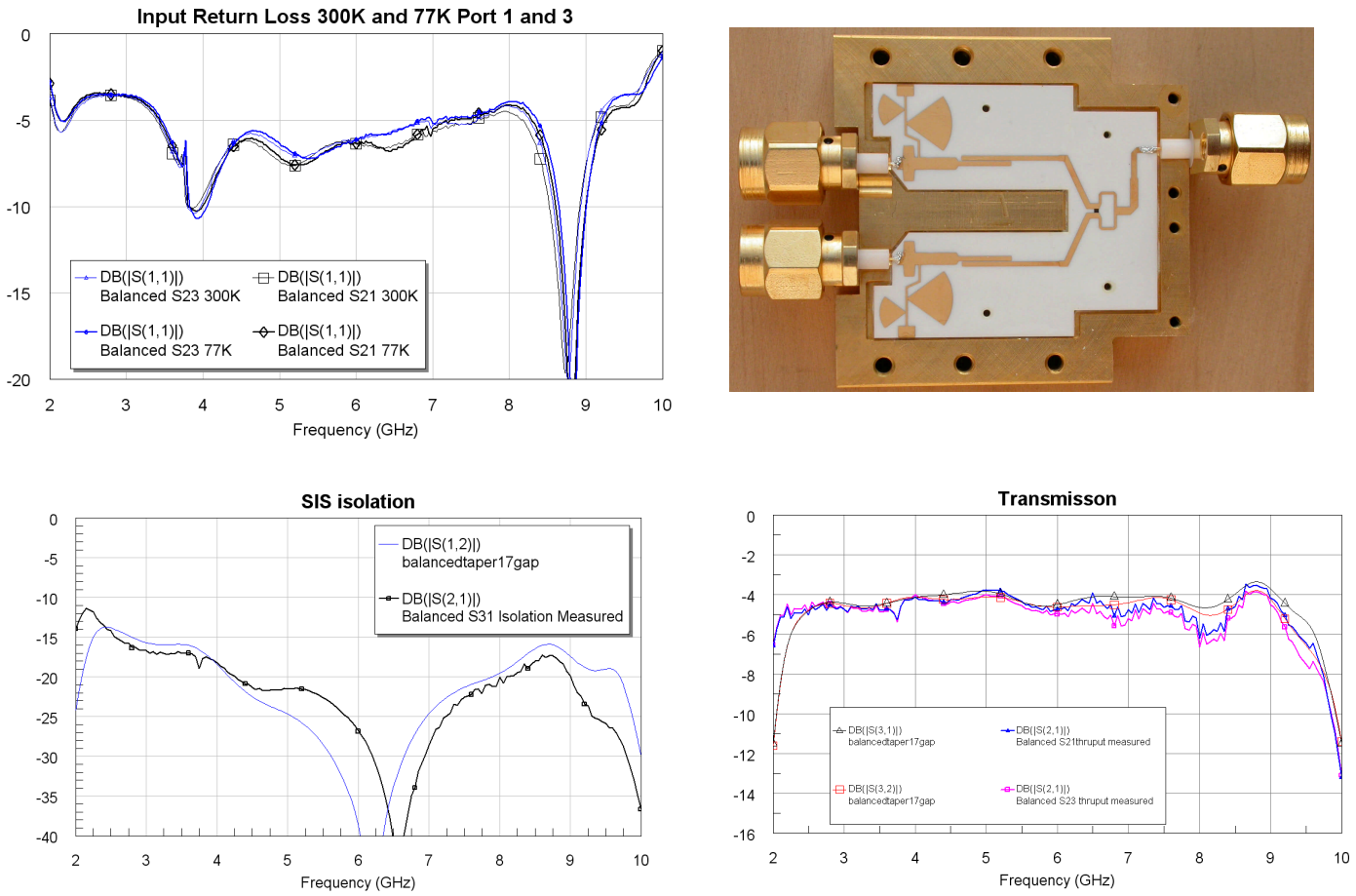

Fig. 6 *Measured and Modeled IF response of the Balanced IF.*

Temperature Dependence

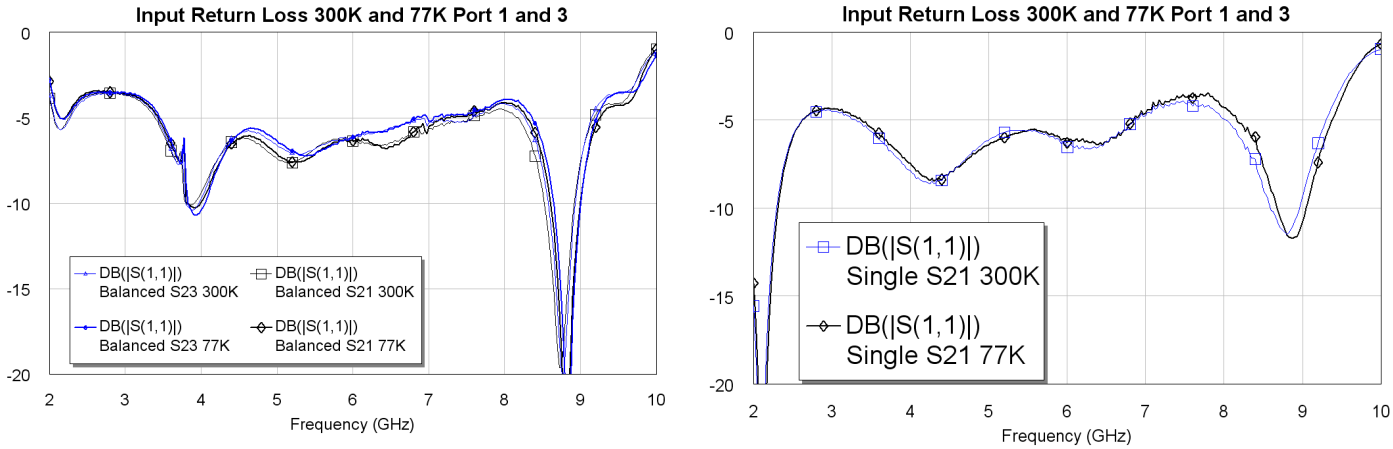

Fig. 7 Input Return Loss (50 Ohm, not 20 Ohm) of the test blocks at 300K and 77K.